NATIONAL MARROW DONOR PROGRAM®

Entrusted to operate the C.W. Bill Young Cell Transplantation Program,
including Be The Match Registry®

April 26, 2012

CDR Sheri Parker
Office of Naval Research (ONR 342)
875 N. Randolph St.
Arlington, VA 22203-1995

Subject: **Quarterly Performance/Technical Report of the National Marrow Donor Program®**

Reference: Grant Award #N00014-11-1-0339 between the Office of Naval Research and the National Marrow Donor Program

Dear Cdr. Parker:

Enclosed is subject document which provides the performance activity for each statement of work task item of the above reference for the period of January 1, 2012 to March 31, 2012.

Should you have any questions as to the scientific content of the tasks and the performance activity of this progress report, you may contact our Chief Medical Officer – Dennis L Confer, MD directly at 612-362-3425.

With this submittal of the quarterly progress report, the National Marrow Donor Program has satisfied the reporting requirements of the above reference for quarterly documentation. Other such quarterly documentation has been previously submitted under separate cover.

Please direct any questions pertaining to the cooperative agreement to my attention at 612-362-3403 or at cabler@nmdp.org.

Sincerely,

Carla Abler Erickson

Carla Abler-Erickson, MA
Sr. Contracts Representative

Enclosure: Quarterly Report with SF298

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REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

1. REPORT DATE *(DD-MM-YYYY)*	2. REPORT TYPE	3. DATES COVERED *(From - To)*
26-04-2012	Quarterly	Jan – Mar 2012

4. TITLE AND SUBTITLE
Development of Medical Technology for Contingency Response to Marrow Toxic Agents - Quarterly Performance/Technical Report for October 01, 2011 to December 31, 2011 Period 4

5a. CONTRACT NUMBER
N/A

5b. GRANT NUMBER
N00014-11-1-0339

5c. PROGRAM ELEMENT NUMBER
N/A

6. AUTHOR(S)
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5d. PROJECT NUMBER
N/A

5e. TASK NUMBER
Project 1, 2, 3, 4

5f. WORK UNIT NUMBER
N/A

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)
National Marrow Donor Program
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8. PERFORMING ORGANIZATION REPORT NUMBER
N/A

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Office of Naval Research
875 N. Randolph St.
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10. SPONSOR/MONITOR'S ACRONYM(S)
ONR

11. SPONSORING/MONITORING AGENCY REPORT NUMBER
N/A

12. DISTRIBUTION AVAILABILITY STATEMENT
Approved for public release; distribution is unlimited

13. SUPPLEMENTARY NOTES
N/A

14. ABSTRACT

1. Contingency Prepardness: Collect information from transplant centers, build awareness of the Transplant Center Contingency Planning Committee and educate the transplant community about the critical importance of establishing a nationwide contingency response plan.

2. Rapid Identification of Matched Donors : Increase operational efficiencies that accelerate the search process and increase patient access are key to preparedness in a contingency event.

3. Immunogenetic Studies: Increase understanding of the immunologic factors important in HSC transplantation.

4. Clinical Research in Transplantation**:** Create a platform that facilitates multicenter collaboration and data management.

15. SUBJECT TERMS
Research in HLA Typing, Hematopoietic Stem Cell Transplantation and Clinical Studies to Improve Outcomes

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT	b. ABSTRACT	c. THIS PAGE	Same as Report	19	Dennis L. Confer, MD – Chief Medical Office
U	U	U			19b. TELEPONE NUMBER (*Include area code)* 612.362.3425

NATIONAL MARROW DONOR PROGRAM®

Creating Connections. Saving Lives.™

Grant Award N00014-11-1-0339

DEVELOPMENT OF MEDICAL TECHNOLOGY FOR CONTINGENCY RESPONSE TO MARROW TOXIC AGENTS

QUARTERLY PERFORMANCE / TECHNICAL REPORT

FOR

JANUARY 01, 2012 to MARCH 31, 2012

PERIOD 5

Office of Naval Research

And

The National Marrow Donor Program
3001 Broadway Street N.E.
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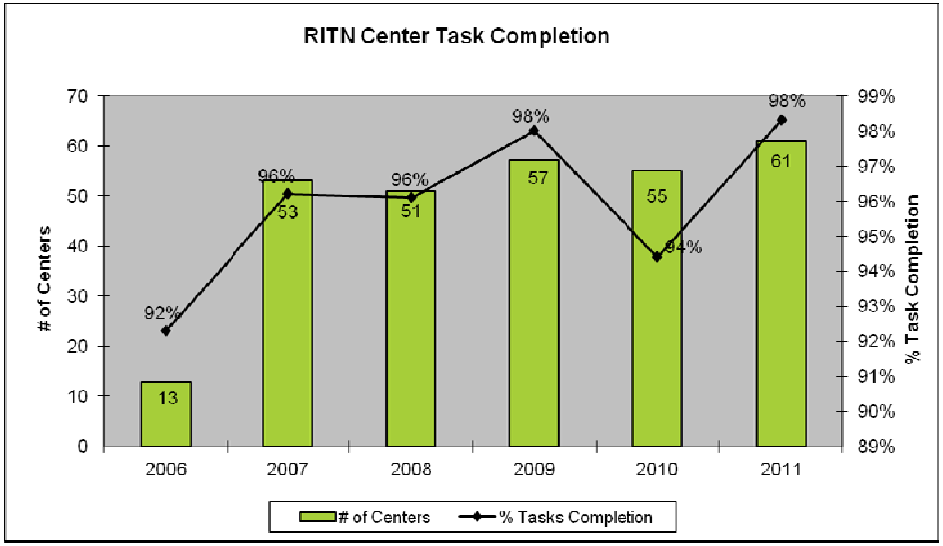
IIA. Contingency Preparedness – Objective 1: Recovery of casualties with significant myelosuppression following radiation or chemical exposure is optimal when care plans are designed and implemented by transplant physicians	
IIA.1 Task 1: Secure Interest of Transplant Physicians	**Period 5 Activity:** • Coordinated the July 2012 advanced training course at the Radiation Emergency Assistance Center and Training Site (REAC/TS) – training and travel will be funded under Navy grant 0142
IIA.1 Task 2: GCSF in Radiation Exposure	**Period 5 Activity:** • No activity this period.
IIA.1 Task 3: Patient Assessment Guidelines and System Enhancements	**Period 5 Activity:** • No activity this period.
IIA 1 Task 4: National Data Collection Model – This task is closed.	
IIA. Contingency Preparedness – Objective 2: Coordination of the care of casualties who will require hematopoietic support will be essential in a contingency situation.	
IIA.2 Task 1: Contingency Response Network	**Period 5 Activity:** • Purchased and distributed to RITN centers additional reference materials to support the care of casualties resulting from a mass casualty incident with marrow toxic injuries: o Disaster Medicine and Public Health Preparedness: Nuclear Preparedness, March 2011 o N Dainiak, RN Gent, Z Carr, et al… Literature Review and Global Consensus on Management of Acute Radiation Syndrome Affecting Non-Hematopoietic Organ Systems, Disaster Medicine and Public Health Preparedness, October 2011 o N Dainiak, RN Gent, Z Carr, et al… First Global Consensus for Evidence-Based Management of the Hematopoietic Syndrome Resulting from Exposure to Ionizing Radiation, Disaster Medicine and Public Health Preparedness, October 2011 • Initiated hiring a contractor to assist with the performance of RITN hospital site assessments • Initiated the development of a Full Scale Exercise to be held at Memorial Sloan Kettering Cancer

	Center in NYC in the fall of 2012; as a deliverable from this exercise a template will be provided to assist future Full Scale Exercises at other RITN centers nationwide. • Completed the creation of the RITN Concept of Operations (ConOps) and released it in PDF format on the RITN website and through email to all RITN partners o The ConOps describes the triage and flow of casualties from the initial catastrophic incident through the disaster aftermath to the treatment facility in a concise 14 page document. o The goal of the RITN ConOps is to establish a uniform understanding among RITN center staff and non-medical RITN partners of the anticipated participation of RITN centers during a national disaster. • Completed the FY11 RITN tasks including the new centers that were given extensions to complete the development of SOPs and execution of tabletop exercises. 
IIA.2 Task 2: Sibling Typing Standard Operating Procedures	**Period 5 Activity:** • No activity this period.

IIA. Contingency Preparedness – Objective 3: NMDP's critical information technology infrastructure must remain operational during contingency situations that directly affect the Coordinating Center.	
IIA.3 Task 1: I.S. Disaster Recovery	**Period 5 Activity:** During this reporting period, NMDP procured additional data storage capacity that allows us to: • synchronize critical data for Donors and Cords • continue supporting disaster recovery environment • reduce the time to resume critical operations
IIA.3 Task 2: Critical Facility and Staff Related Functions	**Period 5 Activity:** • Initiated the annual review of each of the 21 NMDP departments critical task lists and assigned critical personnel • Began planning for the 2012 Business Continuity Plan Exercise
IIB. Rapid Identification of Matched Donors – Objective 1: Increasing the resolution and quality of the HLA testing of volunteers on the registry will speed donor selection.	
IIB.1 Task 1: Increase Registry Diversity	**Period 5 Activity:** • No activity this period.
IIB.1 Task 2: Evaluate HLA-DRB1 High Res typing – This task is closed.	
IIB.1 Task 3: Evaluate HLA-C Typing of Donors – This task is closed	
IIB.1 Task 4: Evaluate Buccal Swabs	**Period 5 Activity:** • No activity this period.
IIB 1 Task 5: Enhancing HLA Data for Selected Donors – This task is closed.	
IIB 1 Task 6: Maintain a Quality Control Program	**Period 5 Activity:** During this quarter, 76 cell lines were received from the cell processing laboratory, in addition to the 16 cell lines received in December 2011. To date, twelve of the 110 cell lines exhibited negative growth

	(11%), and 6 lines are still in culture. Prospective HR-HLA A, C, B, DRB1, DRB3/4/5, DQB1, DPB1 confirmatory typing was completed on 100 of the samples to ensure accuracy of typings entered into the QC database; 5% of the samples had typings that were discrepant with previous known type. Ninety-two cell lines have been processed and incorporated into the regular QC rotation, bringing the total number of B-LCL (buccal) QC Masters to 500, 38 of which contain new or rare alleles.
IIB. Rapid Identification of Matched Donors – Objective 2: Primary DNA typing data can be used within the registry to improve the quality and resolution of volunteer donor HLA assignments.	
IIB 2 Task 1: Collection of Primary Data	**Period 5 Activity:** • No activity this period.
IIB 2 Task 2: Validation of Logic of Primary Data – This task is closed.	
IIB 2 Task 3: Reinterpretation of Primary Data – This task is closed.	
IIB 2 Task 4: Genotype Lists & Matching Algorithm	**Period 5 Activity:** • HL7 o Attended HL7 Working Group Meeting Jan 16-20 • Presented Silver Standard for recording and reporting HLA typing to HL7 Clinical Genomics (CG) working group • Hadassah and Northwestern have been communicating with the HL7 CG working group about messaging standards for tissue typing. We are working collaboratively with the group to prepare a use case to be used to develop HL7 messaging standards that embody Silver Standard principles. o Continued development of a Genetic Testing Report (GTR) that is customized for HLA reporting. The GTR is a Clinical Document Architecture (CDA) document constrained for genetic testing by the HL7 CG working group. • BRAGG standards subcommittee met on Jan 30 o Topics covered included standards for data, messaging, process, architecture, modeling, governance, metadata, and silver standard.

IIB. Rapid Identification of Matched Donors – Objective 3: Registry data on HLA allele and haplotype frequencies and on the nuances of HLA typing can be used to design computer algorithms to predict the best matched donor.

IIB.3 Task 1:
Phase I of EM Haplotype Logic

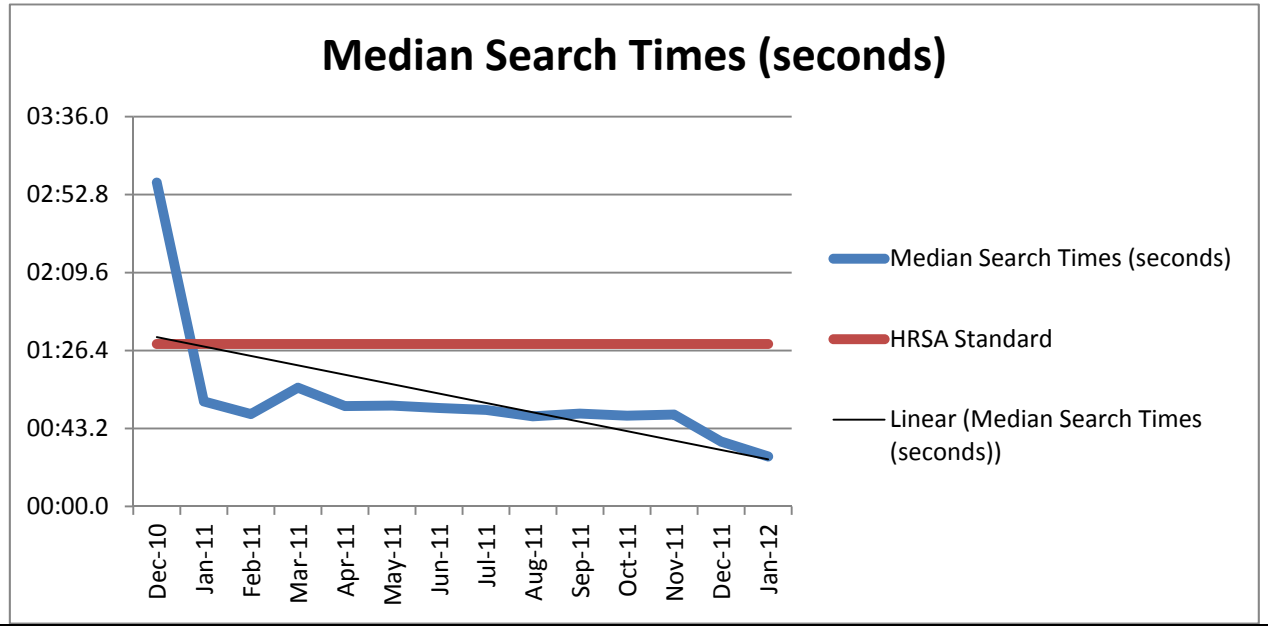
Period 5 Activity:

- Improved automated regression-test coverage for HapLogic III match algorithm.
- Added the 'robust fastload' feature, to allow quicker daily updating of the database.

The following performance improvements to the HapLogic algorithm were achieved during this reporting period:

- Continued reduction in search run times
- Achieved median search run time of 35 seconds

Graph below represents the search run times over the past year:



IIB 3 Task 2: Enhancement of EM Algorithm	**Period 5 Activity:** • Began processing of BMDW data in preparation for 5-locus BMDW haplotype frequency study. • Continued development of a manuscript describing 6-locus haplotype frequency data utilized in HapLogic III. • Calculated 5-locus high-resolution haplotype frequency for Canadian populations by detailed race • Developed simulation framework for testing methods of generating synthetic haplotype frequencies to lower sampling error in population frequencies and submitted abstract to WMDA International Donor Registry Conference. • Launched project to automate quarterly haplotype frequency updates to HapLogic.
IIB 3 Task 3: Optimal Registry Size Analysis	**Period 5 Activity:** • Continued development of a Registry Models Physician-Oriented manuscript • Drafted Registry Models Methods manuscript with an intended audience of bioinformaticians • Performed US Registry Model analysis for US cords for dose varying from 0.5 to 2.0 TNC/kg • Calculated HLA match rates for the Canadian registry
IIB 3 Task 4: Target Under- Repre-sented Phenotypes	**Period 5 Activity:** • Presented hypotheses to the BRAGG committee for approval. Began working with ESRI consultants to develop modeling of concordance maps. • Met with John November (Assistant Professor, Department of Ecology and Evolutionary Biology University of California-Los Angeles) to discuss approaches for modeling HLA concordance. • Prepared a manuscript describing the HLA imputation method, analysis and validation framework and reporting validation results. Manuscript currently being reviewed for submission. • Drafted study design and protocol documents for an Ancestry Questionnaire Pilot (AQP) study to introduce enhancements to the ancestry questionnaire used by donors to join the registry and

	correlate the results with genetic ancestry and HLA information.
IIB 3 Task 5: Bioinformatics Web Site – This task is closed.	
IIB 3 Task 6: Consultants to Improve Algorithm – This task is closed.	
IIB 3 Task 7: Population Genetics – This task is closed.	
IIB 3 Task 8: Haplotype Matching – This task is closed.	
IIB 3 Task 9: Global Haplotype/Benchmark – This task is closed.	
IIB. Rapid Identification of Matched Donors – Objective 4: Reducing the time and effort required to identify closely matched donors for patients in urgent need of HSC transplants will improve access to transplantation and patient survival in the context of a contingency response and routine patient care.	
IIB.4 Task 1: Expand Network Communications – This task is closed.	
IIB.4 Task 2: Central Contingency Management	**Period 5 Activity:** • TC Search Proficiency Study initial results (accrual through September 2011) were published as an abstract and presented as a poster at the February 2012 Tandem BMT (ASBMT/CIBMTR) annual meeting. The initial results of the study were presented to the Histocompatibility Advisory Group (HAG) on January 31st, 2012. The HAG recommended that the study results be shared with the NMDP Executive team. The results were presented at the NMDP Director's Meeting on March 5th, 2012. The results were also presented to the NMDP Case Management department for consideration as a performance metric. Study enrollment continued through December 2011 adding 53 searches and two additional transplant centers. The final data set consists of 619 searches from 132 transplant centers. The additional searches were evaluated using the same scoring system as for the previously published results. These final data will be used to update the statistical analysis of the initial results and prepared as a manuscript in the next quarter. • Analysis to determine the 7/8 donor match rate was initiated using the same cohort of pseudopatients from the 8/8 high resolution donor match rate analysis (completed in a prior grant period). Selection of an HLA typing lab is in process. The study environment is functional and

	review of donor searches has started. Donor typing will begin in the next quarter.
IIB.4 Task 3: Benchmarking Analysis – This task is closed.	
IIB.4 Task 4: Expand Capabilities of Collection and Apheresis Centers – This task is closed.	
IIC. Immunogenetic Studies – Objective 1: HLA mismatches may differ in their impact on transplant outcome, therefore, it is important to identify and quantify the influence of specific HLA mismatches. In contingency situations it will not be possible to delay transplant until a perfectly matched donor can be found.	
IIC.1 Task 1: Donor Recipient Pair Project	**Period 5 Activity:** In 1994 a retrospective D/R Pair HLA typing project to characterize class I and class II alleles of donor/recipient paired samples from NMDP's Repository was initiated. The goals of this ongoing research project are to assay the impact of DNA-based HLA matching on unrelated donor transplant outcome, develop strategies for optimal HLA matching, evaluate the impact of matching at alternative HLA loci on transplant outcome and finally to promote the development of DNA-based high resolution HLA typing methodologies. Presence/absence typing of 14 KIR loci (2DL1-5, 2DS1-5, 3DL1-3 and 3DS1) has been included. • Auditing of HLA and KIR of SG28 has continued with linkage checks, no make resolution and the N of X analysis. Auditing of all data will follow shortly. Current HLA matching guidelines for unrelated HCT recommend avoidance of mismatches only within the Antigen Binding Domain (ABD). This recommendation is based on the hypothesis that amino acid differences outside the ABD are not immunogenic. The ABD allo-reactivity assessment project will give insight into the allowable percent tolerance of matching needed outside of the ABD. • Initiated investigation of a class II non-ABD mismatch (DRB1*140101/1454) where both alleles were seen in the same genotype. • 72 donors were invited to participate in the study. 21 study participants consented and submitted blood samples. Eleven pairs representing four distinct haplotypes were selected for in vitro testing. • The initial results 1 of 6 tested combinations alloreactive to the non-ABD mismatch in both the mixed lymphocyte culture and ELISpot assays. Confirmatory tests are being performed to determine whether the alloreactivity was due to the non-ABD mismatch or disparity at HLA-DRB3,

	which was mismatched in the specimens. The confirmatory tests will incorporate blocking antibodies to DRB3 to isolate the impact of the DRB1 disparity. Data will be available in the next quarter.
IIC. Immunogenetic Studies – Objective 2: Even when patient and donor are HLA matched, GVHD occurs so other loci may play a role.	
IIC 2 Task 1: Analysis of non-HLA loci	**Period 5 Activity:** The Immunobiology Project Results (IPR) database and its applications allow for storage and analysis of all immunogenetic data collected on NMDP research samples. This database has replaced the existing HLA donor/recipient pair's database and facilitates storage and analysis of data from other immunogenetic loci (KIR, microsatellites, single nucleotide polymorphisms, etc). During Period 12 Quality assurance was completed on the next release, which includes: • The migration of historical data from the legacy system. • A 'Completed Pairs' report that summarizes the extent to which each sample group is complete. • An enhanced 'Study Sideways' report which displays the audit and active status of each BMT along with the final typings to be used in studies. • A report to assist the audit process by reporting on unexpected/unusual B-C linkages. • Running preliminary experiments to investigate genetic analysis for genetic ancestry matching of donors and patients and the effect on outcomes. • Designing, drafting and submitting a proposal to the CIBMTR Immunobiology Working Group to study the effect of matched genetic ancestry of donors and patients on transplant outcomes – this was accepted and is currently under development. • A poster for the same study was presented in the Feb 2012 Tandem meeting.
IIC 2 Task 2: Related Pairs Research Repository – This task is closed.	
IIC 2 Task 3: CIBMTR Integration – This task is closed.	

IID. Clinical Research in Transplantation – Objective 1: Clinical research in transplantation improves transplant outcomes and supports preparedness for a contingency response.	
IID.1 Task 1: Observational Research, Clinical Trials and NIH Transplant Center	**Period 5 Activity:** **Prospective Studies; RCI BMT** • During this quarter, monitoring activities continued at participating donor centers for the PBSC vs. Marrow clinical trial. • Staff continued to coordinate, manage data collection and monitor sites related to the Adult Double Cord trial. • Activities continued on the Long Term Donor Follow up project. During this reporting period we reached an accrual of 10,500 donors. Donor Centers continue to actively perform consent sessions with donors during their standard work-up process. • Database management updates were made to the AdvantageEDC℠ system used for both the Double Cord and Revelimid trials. **Information Technology: FormsNet and AGNIS** FormsNet Additional accomplishments were made in delivering new functionality, improving data quality, data capture and data reporting through the CIBMTR IT suite of applications. A technical release was completed to lay the foundation for the FormsNet application upgrade planned in late 2012. An additional release was completed that increased data quality and improved the efficiency in preparing data for analysis for Observational Studies. A release was implemented to automate monitoring of a clinical trial, thereby increasing efficiency FormsNet 3 is a little over half way through the development phase and the project is on track for a Nov 2012 implementation. The use of the Agile methodology approach is working very well, providing frequent opportunities for the business to view and test the deliverables/system.

AGNIS

- Released support of form 2000 in the AGNIS Publisher (3/27/12)
- Testing of forms 2018 and 2118 (Lymphoma Disease forms)
- Production submission available for EBMT to submit forms 2400 and 2804. Working to expand 2400 diseases for submission and EBMT center data sharing agreements
- Continue to support EBMT efforts for bulk form submission
- Stanford has submitted an error free 2400 in development.
- Remedy Md is submitting forms 2900, 2804, and 2450 in production for University of Utah. Development efforts to submit other forms and to retrieve forms underway.
- 20 StemSoft centers retrieving data.

Cord Blood Research

- The analysis evaluating the likelihood of finding a non-inherited maternal antigen/allele (NIMA) match for HLA mismatched cord blood unit for transplant when upfront maternal typing is not available. The retrospective analysis compared the frequencies of the NIMA matched and mismatched HLA- A, B antigens or DRB1 alleles found in the Eurocord/NMDP/CIBMTR study to determine any significant differences.
  - Results have been incorporated into a manuscript and submitted to *Hematologica*.
- Development of the anti-HLA donor specific antibody study of recipients transplanted with cord blood units was initiated.
- The white paper detailing recommendations/guidelines for the assessment of new assays (potency or other assays) relevant to cord blood banking and/or transplantation published in Cytotherapy March 2011 has generated interest from potential industry partners.
  - The final protocol to assess inter-laboratory variability utilizing the HALO assay was reviewed

	and approved by the Cord Blood Advisory Group (CBAG) was finalized. o Members of the CBAG expressed interest in the validation; however, upon solicitation of member banks for completion of the validation none could commit to the effort due to other priorities. The cord blood banks expressed a need to focus on FDA licensure efforts. o The validation project will be re-visited in the coming year. • Work continued on a study to assess CBU characteristics (viability, TNC, CFU and CD34) pre-freeze and post thaw. • Work was initiated and completed on an assessment of the impact of donor inherited paternal antigen (IPA) disparity on outcomes after unrelated cord blood transplantation (UCBT) for acute lymphoblastic leukemia and acute myelogenous leukemia. o Results were detailed in an abstract submitted for presentation at the 2012 International Cord Blood Symposium.
IID.1 Task 2: Research with NMDP Donors – This task is closed.	
IID.1 Task 3: Expand Immuno-biology Research	**Period 5 Activity:** The CIBMTR IBWC met monthly during the quarter to discuss progress on ongoing research studies • The IBWC held its annual meeting at the 2012 BMT Tandem meetings. o 8 new proposals were reviewed and 6 accepted for analysis • One abstract was presented: o Fabio Giglio, et al., *KIR3DL1/S1 and HLA-B alleles combine to influence unrelated hematopoietic stem cell transplantation outcomes.* Oral presentation 2012 BMT Tandem Meetings. • One abstract was accepted: o Carolyn Hurley, et al., *Impact of unidirectional mismatches on the outcome of unrelated donor*

hematopoietic stem cell transplantation. Oral presentation 2012 IHIW/EFI/BSHI joint meetings.

- Four manuscripts were submitted:
  - John Horan, et al., *Evaluation of HLA matching unrelated hematopoietic stem cell transplantation for non-malignant disorders.* Submitted to Blood.
  - Effie Petersdorf, et al., *The role of major histocompatibility complex variation in unrelated donor hematopoietic cell transplantation.* Submitted to Science Translational Medicine.
  - Stephen Spellman, et al., *A perspective on the selection of unrelated donors and cord blood units for transplantation.* Submitted to Blood.
  - Sarah Cooley, et al., *The protective effect of unrelated donors with killer-cell immunoglobulin-like receptor (KIR) B genes is enhanced in recipients with HLA-C1 group ligands.* Submitted to Blood.
- Two manuscripts were published:
  - Katharina Fleischhauer, et al., *Non-permissive HLA-DPB1 T cell epitope mismatches increase mortality after unrelated donor hematopoietic cell transplantation.* Published in Lancet Oncology.
  - Kim Pearce, et al., *Analysis of non-HLA genomic risk factors in HLA-matched unrelated donor hematopoietic cell transplantation for chronic myeloid leukemia.* Published in Hematologica.

ACRONYM LIST

AABB	American Association of Blood Banks	HLA	Human Leukocyte Antigen
AFA	African American	HML	Histoimmunogenetics Mark-up Language
AGNIS	A Growable Network Information System	HR	High Resolution
AML	Acute Myelogenous Leukemia	HRSA	Health Resources and Services Administration
ABD	Antigen Binding Domain	HSC	Hematopoietic Stem Cell
API	Asian Pacific Islander	IBWC	Immunobiology Working Committee
AQP	Ancestry Questionnaire Pilot	IDM	Infectious Disease Markers
ARS	Acute Radiation Syndrome (also known as Acute Radiation Sickness)	IHWG	International Histocompatibility Working Group
ASBMT	American Society for Blood and Marrow Transplantation	IPR	Immunobiology Project Results
ASHI	American Society for Histocompatibility and Immunogenetics	ICRHER	International Consortium for Research on Health Effects of Radiation
B-LCLs	B-Lymphoblastoid Cell Lines	IND	Investigational New Drug
BARDA	Biomedical Advanced Research and Development Authority	IS	Information Services
BBMT	Biology of Blood and Marrow Transplant	IT	Information Technology
BCP	Business Continuity Plan	IRB	Institutional Review Board
BCPeX	Business Continuity Plan Exercise	JCAHO	Joint Commission on Accreditation of Healthcare Organizations
BMCC	Bone Marrow Coordinating Center	KIR	Killer Immunoglobulin-like Receptor
BMDW	Bone Marrow Donors Worldwide	MDACC	MD Anderson Cancer Center
BMT	Bone Marrow Transplantation	MDS	Myelodysplastic Syndrome
BMT CTN	Blood and Marrow Transplant - Clinical Trials Network	MHC	Major Histocompatibility Complex
BODI	Business Objects Data Integrator	MICA	MHC Class I-Like Molecule, Chain A
BRT	Basic Radiation Training	MICB	MHC Class I-Like Molecule, Chain B
C&A	Certification and Accreditation	MKE	Milwaukee
CAU	Caucasian	MRD	Minimal Residual Disease
CBMTG	Canadian Blood and Marrow Transplant Group	MSKCC	Memorial Sloan-Kettering Cancer Center
CBB	Cord Blood Bank	MSP	Minneapolis

CBC	Congressional Black Caucus	MUD	Matched Unrelated Donor
CBS	Canadian Blood Service	NAC	Nuclear Accident Committee
CBU	Cord Blood Unit	NCBM	National Conference of Black Mayors
CHTC	Certified Hematopoietic Transplant Coordinator	NCI	National Cancer Institute
CIBMTR	Center for International Blood & Marrow Transplant Research	NEMO	N-locus Expectation-Maximization using Oligonucleotide typing data
CIT	CIBMTR Information Technology	NHLBI	National Heart Lung and Blood Institute
CLIA	Clinical Laboratory Improvement Amendment	NIH	National Institutes of Health
CME	Continuing Medical Education	NIMS	National Incident Management System
CMF	Community Matching Funds	NK	Natural Killer
COG	Children's Oncology Group	NLE	National Level Exercise
ConOps	Concept of Operations	NMDP	National Marrow Donor Program
CREG	Cross Reactive Groups	NRP	National Response Plan
CSS	Center Support Services	NST	Non-myeloablative Allergenic Stem Cell Transplantation
CT	Confirmatory Testing	OCR/ICR	Optical Character Recognition/Intelligent Character Recognition
CTA	Clinical Trial Application	OIT	Office of Information Technology
CWD	Common and Well Documented	OMB	Office of Management and Budget
DC	Donor Center	ONR	Office of Naval Research
DHHS-ASPR	Department of Health and Human Service – Assistant Secretary Preparedness and Response	P2P	Peer-to-Peer
DIY	Do it yourself	PBMC	Peripheral Blood Mononuclear Cells
DKMS	Deutsche Knochenmarkspenderdatei	PBSC	Peripheral Blood Stem Cell
DMSO	Dimethylsulphoxide	PCR	Polymerase Chain Reaction
DoD	Department of Defense	PSA	Public Service Announcement
DHHS-ASPR	Department of Health and Human Services – Assistant Secretary for Preparedness and Response	QC	Quality control
DNA	Deoxyribonucleic Acid	RCC	Renal Cell Carcinoma
DR	Disaster Recovery	RCI BMT	Resource for Clinical Investigations in Blood and Marrow Transplantation
D/R	Donor/Recipient	REAC/TS	Radiation Emergency Assistance Center/Training Site

EBMT	European Group for Blood and Marrow Transplantation	RFP	Request for Proposal
EDC	Electronic Data Capture	RFQ	Request for Quotation
EFI	European Federation of Immunogenetics		
ELISpot	Enzyme-Linked Immunosorbent Spot	RG	Recruitment Group
EM	Expectation Maximization	RITN	Radiation Injury Treatment Network
EMDIS	European Marrow Donor Information System	SBT	Sequence Based Typing
ENS	Emergency Notification System	SCTOD	Stem Cell Therapeutics Outcome Database
ERSI	Environment Remote Sensing Institute	SG	Sample Group
FBI	Federal Bureau of Investigation	SLW	STAR Link® Web
FDA	Food and Drug Administration	SSA	Search Strategy Advice
FDR	Fund Drive Request	SSO	Sequence Specific Oligonucleotide
FLOCK	Flow Cytometry Analysis Component	SSP	Sequence Specific Primers
Fst	Fixation Index	SSOP	Sequence Specific Oligonucleotide Probes
GETS	Government Emergency Telecommunications Service	STAR®	Search, Tracking and Registry
GCSF	Granulocyte-Colony Stimulating Factor (also known as filgrastim)	TC	Transplant Center
GIS	Geographic Information System	TED	Transplant Essential Data
GvHD	Graft vs. Host Disease	TNC	Total Nucleated Cell
HCS	HealthCare Standard	TSA	Transportation Security Agency
HCT	Hematopoietic Cell Transplantation	UI	User Interface
HEPP	Hospital Emergency Preparedness Program	UML	Unified Modeling Language
HHQ	Health History Questionnaire	URD	Unrelated Donor
HHS	Health and Human Services	WGA	Whole Genome Amplification
HIPAA	Health Insurance Portability and Accountability Act	WMDA	World Marrow Donor Association
HIS	Hispanic	WU	Work-up